

DRAFT

FY 2006 Tennessee Supplement to Conservation Programs

Manual (440-V-CPM, part 517)

Wildlife Habitat Incentives Program

TABLE OF CONTENTS

CPM Part 517 Reference	Subject	Page Number
517.01	General Provisions	2
517.07	General Requirements	2
517.13	Tennessee Ranking Criteria	2
517.33	Conservation Practices	26
517.50	Evaluation	86

517.01 General Provisions

Tennessee WHIP Objectives: Tennessee's priority WHIP objective is to increase habitat and populations of early succession wildlife species. Indicator species selected for early succession habitat are bobwhite quail and other avian species associated with grassland and early succession/shrub habitats. The Tennessee Wildlife Resource Agency and the U.S. Fish and Wildlife Service have identified bobwhite quail and associated avian species as being a "Priority Conservation Concern" in Tennessee. Other State objectives focus on habitat improvement for wetland wildlife, stream and fisheries, and designated threatened or endangered species. Habitat improvements are being achieved by implementation of conservation practices beneficial to these species.

Invasive plant species control has been added to Tennessee's WHIP objectives as invasive species compete with native species and decrease the quality, quantity, and diversity of early succession and upland wildlife habitat.

The 2006 WHIP Implementation Plan tiers to the State of Tennessee's "Comprehensive Wildlife Conservation Strategy" administered by the Tennessee Wildlife Resources Agency (TWRA). WHIP directly addresses Element 4 of the CWCS: "... conservation actions necessary to conserve identified species and habitats and priorities for implementing such actions".

Priority areas are set throughout the state based on the recovery potential for indicator and target species. The Tennessee WHIP priority area map is included in 517.13 Ranking Criteria.

517.07 General Requirements

General Requirements: Completion of a TN-CPA-25, Environmental Effects for Conservation and Area-wide Plans, certifying national Environmental Policy Act (NEPA) and compliance with other applicable laws and regulations is required for each Wildlife Habitat Incentives Program (WHIP) Wildlife Habitat Development Plan.

517.13 Tennessee Ranking Criteria

State Ranking Criteria: The ranking criteria were developed to prioritize sites offered into the program that:

- Provide early succession wildlife habitat consisting of native warm season grasses or shrubs
- Provide wetland wildlife habitat
- Provide specific habitat for designated threatened or endangered species,
- Provide water quality benefits to stream and aquatic wildlife, and
- Address invasive species control.

WHIP applications with the highest ranking scores will be funded. The amount of funding available is based on annual Congressional appropriations.

The Tennessee WHIP ranking criteria can be viewed at the following web address:

<http://www.tn.nrcs.usda.gov>

Go to '*Programs*' and then '*WHIP*'.

The following *Table A. State and Federal Threatened and Endangered Species Benefited by WHIP Practices* and the *WHIP Priority Map* are needed to complete the scoring in the ranking criteria.

TABLE A. STATE AND FEDERAL THREATENED AND ENDANGERED SPECIES BENEFITED BY WHIP PRACTICES.

WHIP applications with planned practices within geographic areas, as listed, will be awarded points in the WHIP ranking system.

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
ANDERSON COUNTY		
Clinch River Watershed	WHIP 2, 11, 12, 14 (Streambank)	Blue Sucker Slender Chub Freshwater Mussels
Clinch River Floodplain	WHIP 4 (Cropland Conversion)	Freshwater Mussels
Countywide	WHIP 4, 5	Bewick's Wren
BEDFORD COUNTY		
Duck River Watershed	WHIP 2, 11, 12, 14 (Streambank)	Freshwater Mussels Coppercheek Darter
Duck River Floodplain	WHIP 4 (Cropland Conversion)	Freshwater Mussels
Cedar Glades Only	WHIP 4, 6, 14	Leafy Prairie Clover Glade-cress Duck River Bladderpod
Portion of County South of Duck River and East of Thompson Creek	WHIP 13 (Tree Planting)	Gray bat Indiana Bat
BENTON COUNTY		
No Species Benefited		
BLEDSON COUNTY		
Countywide	WHIP 13 (Tree Planting)	Gray Bat White Fringeless Orchid

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
BLOUNT COUNTY		
Little River Watershed	WHIP 2, 4, 12, 14 (Streambank)	Freshwater Mussels Longhead Darter Dusky Tail Darter
Countywide	WHIP 4 (Bottomland Hardwoods)	Rock Skullcap Longleaf Stitchwort
Little Tennessee River Watershed	WHIP 2, 4, 11, 12, 14 (Streambank)	Spotfin Chub
BRADLEY COUNTY		
Conasauga River Watershed	WHIP 2, 4, 11, 12, 14 (Streambank)	Freshwater Mussels Fish
CAMPBELL COUNTY		
Countywide	WHIP 4, 5	Bewick's Wren
Clear Fork Cumberland River and Elk Creek Watersheds	WHIP 2, 4, 11, 12, 14 (Streambank)	Freshwater Mussels Fish Indiana, Gray Bats
CANNON COUNTY		
Countywide	WHIP 4, 5, 6	Bewick's Wren
Barren Fork Watershed	WHIP 2, 4, 11, 12, 14 (Streambank)	Barrens Darter Barrens Topminnow
East Fork Stones River Watershed	WHIP 13 (Tree Planting)	Gray Bat
CARROLL COUNTY		
No Species Benefited		
CARTER COUNTY		
Watauga River Watershed	WHIP 2, 4, 11, 12, 14 (Streambank)	Longhead Darter

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
CHEATHAM COUNTY		
Cumberland River Floodplain	WHIP 13 (Tree Planting)	Gray Bat
Cedar Glades	WHIP 4, 6, 14	Duck River Bladderpod
CHESTER COUNTY		
No species benefited		
CLAIBORNE COUNTY		
Little Yellow Creek Watershed	WHIP 2, 4, 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Clear Fork Cumberland River Watershed	WHIP 2, 4, 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Little Tackett Creek Watershed	WHIP 2, 4, 11, 12 13, 14 (Streambank)	Freshwater Mussels Fish
Powell River Floodplain	WHIP 13 (Tree Planting)	Gray Bat
CLAY COUNTY		
Cumberland River Floodplain	WHIP 13 (Tree Planting)	Gray Bat
Countywide	WHIP 14 (Bottomland Hardwoods)	Spring Blue-eyed Land Mary
COCKE COUNTY		
Nolichucky River Floodplain Upstream of Douglas Lake	WHIP 13 (Tree Planting)	Gray bat
French Broad River Watershed	WHIP 2, 4, 11, 12, 13, 14 (Streambank)	Fish
Countywide	WHIP 4 (Bottomlands Only)	Fraser's Loosestrife Virginia Mallow Clingman's Hedgenettle

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
COFFEE COUNTY		
Bradley Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14	Fish Freshwater Mussels
Duck River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14	Fish Freshwater Mussels
Countywide	WHIP 13, 14 (Wetlands, Farmed Wetland Pasture)	Creeping St. John's-wort Canby's Lobelia Globe-fruit False Loosestrife Swamp Loosestrife Swamp Lousewort Zigzag Bladderwort Fringed Yellow-eyed Grass Barratt's Sedge Slender Blueflag Snowy Orchid Rose Pogonia Loose-headed Beakrush Obscure Beakrush Grassleaf Arrowhead
The Barrens Only	WHIP 4	Coastal Sweet Pepper-bush White-bracted Thoroughwort Narrowleaf Bushclover Southern Prairie-dock Hairy Fimbristylis Carolina Redroot Southern Twayblade Torey's Dropseed Needleleaf Witchgrass
CROCKETT COUNTY		
No Species Benefited		

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
CUMBERLAND COUNTY		
Emory River Watershed (Daddy's Creek, Clear Creek, Obed River)	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Purple Bean Mussel Spotfin Chub
Countywide	WHIP 4, 6	Bachman's Sparrow
Countywide	WHIP 13	Pink Sundew Canby's Lobelia Large-flower Barbara Buttons Swamp Lousewort Brown Bog Sedge Bog-buttons Tawny Cotton Grass Rose Pogonia
DAVIDSON COUNTY		
Countywide	WHIP 4, 5, 6	Bewick's Wren
Mill Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streams)	Nashville Crayfish
Cedar Glades Only	WHIP 4, 6, 14	Leafy Prairie Clover Glade-cress Duck River Bladderpod Tennessee Coneflower Short's Bladderpod Glade Cleft-phlox Prairie Parsley Glade Onion Guthrie's Ground Plum
DECATUR COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow Bewick's Wren Slender Blazing Star Western False Gromwell

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
DEKALB COUNTY		
Smith Fork Watershed	WHIP 13 (Tree Planting)	Gray Bat
DICKSON COUNTY		
No Species Benefited		
DYER COUNTY		
No Species Benefited		
FAYETTE COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow
FENTRESS COUNTY		
White Oak Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Cumberland Elktote
Clear Fork River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Cumberland Elktote
Clear Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Cumberland Elktote
Wolf River Watershed	WHIP 13 (Tree Planting)	Indiana Bat
East Fork Obed River Watershed	WHIP 13 (Tree Planting)	Indiana Bat
FRANKLIN COUNTY		
West of Belvidere and South of Tims Ford Lake and Elk River	WHIP 13 (Tree Planting)	Gray Bat Indiana bat
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow
The Barrens Only	WHIP 4	Smooth False Gromwell Southern Prairie Dock Roundleaf Flameflower

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
Buck Creek Cove	WHIP 14	Painted Disc Snail
GIBSON COUNTY		
No Species Benefited		
GILES COUNTY		
Countywide	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Boulder Darter Snail Darter
Cedar Glades Only	WHIP 4, 6, 14	Duck River Bladderpod Glade-cress
GRAINGER COUNTY		
East of Highway 111W and South of Highway 92	WHIP 13 (Tree Planting)	Indiana Bat Gray Bat
GREENE COUNTY		
Nolichucky River Watershed Downstream of Highway 340	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels
Portion of County Between Russell Crossroad, the Cocke County Line and East of David Crockett Lake	WHIP 13 (Tree Planting)	Gray Bat
GRUNDY COUNTY		
Collins River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Cumberland Pigtoe Jewel Darter Cumberland Elktote
Bog Areas Only	WHIP 13	Canby's Lobelia Large Cranberry
HAMBLEN COUNTY		
No Species Benefited		

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
HAMILTON COUNTY		
South Chickamauga Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 13 (Streambank)	Freshwater Mussels Snail Darter
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow Bewick's Wren
HANCOCK COUNTY		
Powell River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Clinch River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
HARDEMAN COUNTY		
No Species Benefited		
HARDIN COUNTY		
Countywide	WHIP 4, 5, 6	Bewick's Wren
HAWKINS COUNTY		
North Fork Holston River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Spotfin Chub
Beech Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels
Big Creek Watershed	WHIP 13 (Tree Planting)	Indiana Bat Gray Bat
HAYWOOD COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
HENDERSON COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow Bewick's Wren
HENRY COUNTY		
No Species Benefited		
HICKMAN COUNTY		
Little Piney River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Beaver Dam Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Sugar Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Cane Creek Watershed	WHIP 2, 4, (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Duck River Floodplain	WHIP 13 (Tree Planting)	Gray Bat
Portion of County Southeast of Centerville between Highway 50 and Highway 48/100	WHIP 13 (Tree Planting)	Gray Bat
HOUSTON COUNTY		
No Species Benefited		
HUMPHREYS COUNTY		
Duck River Watershed above Hurricane Creek including Hurricane Creek	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 Creek (Streambank)	Freshwater Mussels Fish

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
JACKSON COUNTY		
Portion of County West of Highway 56	WHIP 13 (Tree Planting)	Gray Bat
JEFFERSON COUNTY		
No Species Benefited		
JOHNSON COUNTY		
Bog Areas Only	WHIP 13	Bog Turtle Marsh Marigold Linear Leaved Willow Herb Halberd-leaf Tearthumb Canada Burnet Rock Skullcap Narrow-leaf Meadow Sweet Large Cranberry Kidney Leaf Twayblade Large Round-leaved Orchid Large Purple Fringed Orchid Small Purple Fringed Orchid Skunk Cabbage Pale St. John's Wort Marsh Speedwell Carex Rostrata Tawny Cotton-grass
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
KNOX COUNTY		
French Broad River Floodplain Upstream of Fort Loudoun Lake	WHIP 13 (Tree Planting)	Gray Bat
Holston River Floodplain Upstream of Fort Loudoun Lake	WHIP 13 (Tree Planting)	Gray Bat
LAKE COUNTY		
No Species Benefited		

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
LAUDERDALE COUNTY		
No Species Benefited		
LAWRENCE COUNTY		
Buffalo River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Slackwater Darter
Chief Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Slackwater Darter
Shoal Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Slackwater Darter
Little Buffalo River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Slackwater Darter
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow Bewick's Wren
LEWIS COUNTY		
Buffalo River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Fish Pale Lilliput Mussel
LINCOLN COUNTY		
Brier Fork of Flint River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Fish Freshwater Mussels
Elk River Floodplain	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
East Fork Mulberry Creek Watershed	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
Cedar Glades Only	WHIP 4, 6, 14	Duck River Bladderpod
LOUDON COUNTY		
No Species Benefited		

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
MACON COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
MADISON COUNTY		
No Species Benefited		
MARION COUNTY		
Sequatchie River Floodplain	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
Portion of County South of Highway 64	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
Countywide	WHIP 14 (Streams)	Royal Snail
MARSHALL COUNTY		
Duck River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Coppercheek Darter Freshwater Mussels
Cedar Glades Only	WHIP 4, 6, 14	Leafy Prairie Clover Glade-cress Duck River Bladderpod
MAURY COUNTY		
Countywide	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Coppercheek Darter Freshwater Mussels
Portion of County South of Columbia Between Highway 7 and Highway 43	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
Cedar Glades Only	WHIP 4, 6, 14	Leafy Prairie Clover Glade-cress Duck River Bladderpod Short's Bladderpod Starry Cerastium Narrow Leaved Umbrella-wort

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
MCMINN COUNTY		
No Species Benefited		
MCNAIRY COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow Southern Morning Glory Prairie Parsley
MEIGS COUNTY		
Sewee Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Snail Darter Freshwater Mussels
Tennessee River Floodplain below Watts Bar Lake and above Chickamauga Lake	WHIP 13 (Tree Planting)	Gray Bat
MONROE COUNTY		
Little Tennessee River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Fish Freshwater Mussels
MONTGOMERY COUNTY		
Southeast Portion of County between Highway 41 and Cumberland River	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
Western Portion of County South of Highway 79, West of Moore Hollow Road and North of Cumberland River	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow Bewick's Wren Pale-purple Coneflower Sweet Coneflower Compass Plant Southern Prairie Dock

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
MOORE COUNTY		
East Fork Mulberry Creek Watershed	WHIP 13 (Tree Planting)	Gray Bat
MORGAN COUNTY		
Emory River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Spotfin Chub Freshwater Mussels Longhead Darter
OBION COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
OVERTON COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
PERRY COUNTY		
Tennessee River Floodplain	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
Buffalo River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Coppercheek Darter
PICKETT COUNTY		
No Species Benefited		
POLK COUNTY		
Conasauga River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Bog Areas Only	WHIP 14	Large Cranberry Tawny Cotton-grass Sweetbay Magnolia

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
PUTNAM COUNTY		
Falling Water River Watershed Downstream of City Lake and above Burgess Falls Lake	WHIP 13 (Tree Planting)	Gray Bat
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow
RHEA COUNTY		
Tennessee River Floodplain below Watts Bar Lake and above Chickamauga Lake	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Portion of County South of Clear Creek, West of Tennessee River and East of Highway 27/29	WHIP 13 (Tree Planting)	Gray Bat
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow
ROANE COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bachman's Sparrow Bewick's Wren
Bog Areas Only	WHIP 13	Swamp Lousewort Fen Orchid Tubercled Rein-orchid
ROBERTSON COUNTY		
South Fork Red River Watershed	WHIP 13 (Tree Planting)	Gray Bat
RUTHERFORD COUNTY		
Portion of County East of Highway 231 and North of Halls Hill Road	WHIP 13 (Tree Planting)	Gray Bat
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
RUTHERFORD COUNTY CONTINUED		
Cedar Glades Only	WHIP 4, 6, 14	Leafy Prairie Clover Glade-cress Duck River Bladderpod Tennessee Coneflower Running Glade Clover Glade Cleft-phlox Glade Onion Guthrie's Ground Plum
SCOTT COUNTY		
Big South Fork Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
Jellico Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
SEQUATCHIE COUNTY		
Sequatchie River Floodplain	WHIP 13 (Tree Planting)	Gray Bat
SEVIER COUNTY		
Little Pigeon River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Orangefoot Pimpleback Blue Sucker Longhead Darter
French Broad River Floodplain Downstream of Douglas Lake	WHIP 13 (Tree Planting)	Indiana Bat
SHELBY COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren

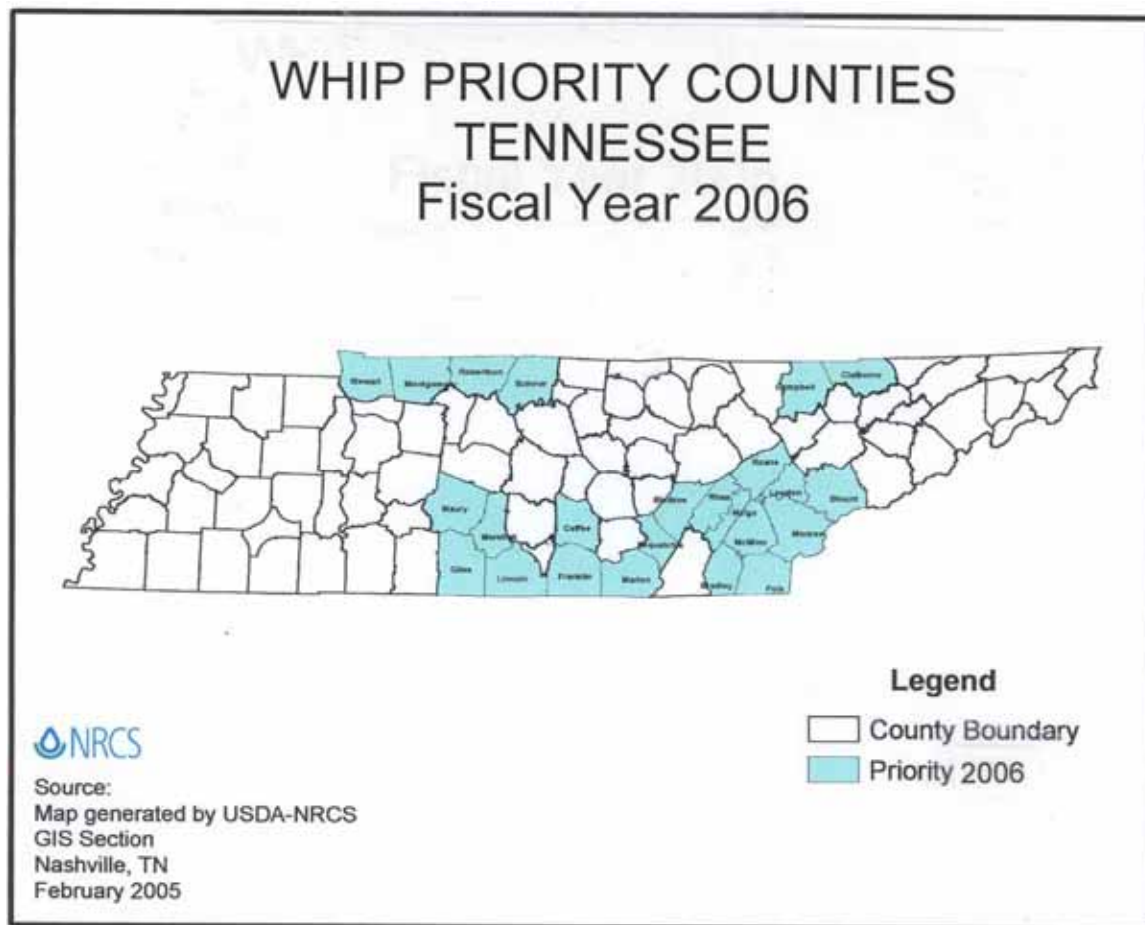
<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
SMITH COUNTY		
Cumberland River Floodplain Downstream of Carthage	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
Portion of County North of Highway 70, West of Difficult, South of Pleasant Shade, and East of Dixon Springs	WHIP 13 (Tree Planting)	Gray Bat
STEWART COUNTY		
Portion of County North of Saline Creek, East of Lake Barkley, and West of Highway 120	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
SULLIVAN COUNTY		
North Fork Holston River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels) Fish
Portion of County South of Highway 421 and East of Highway 19E	WHIP 13 (Tree Planting)	Gray Bat
SUMNER COUNTY		
Portion of County West of Highway 109 and South of Highway 25	WHIP 13 (Tree Planting)	Gray Bat
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
Cedar Glades Only	WHIP 4, 6, 9	Leafy Prairie Clover
TIPTON COUNTY		
No Species Benefited		

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
TROUSDALE COUNTY		
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
Cedar Glades Only	WHIP 4, 6, 9	Glade-cress Short's Bladderpod
UNICOI COUNTY		
Nolichucky River Watershed	WHIP 2, 4 (Cropland Conversion) 11 12, 13, 14 (Streambank)	Appalachian Elktoe
UNION COUNTY		
No Species Benefited		
VAN BUREN COUNTY		
Cane Creek Watershed Downstream Fall Creek Falls State Park	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Indiana Bat
Rocky River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Indiana Bat
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
WARREN COUNTY		
Collins River Watershed Upstream from McMinnville	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14, (Streambank)	Freshwater Mussels Indiana Bat Gray Bat Fish
Rocky River Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Freshwater Mussels Fish
WASHINGTON COUNTY		
No Species Benefited		

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
WAYNE COUNTY		
Cypress Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Cracking Pearlymussel Slackwater Darter Copper Cheek Darter Crown Darter
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
Portion of County East of Highway 13 and North of Highway 64	WHIP 13 (Tree Planting)	Gray Bat
Portion of County South of Highway 64, West of Highway 13, and North of Highway 203	WHIP 13 (Tree Planting)	Gray Bat
WEAKLEY COUNTY		
No Species Benefited		
WHITE COUNTY		
Calfkiller River Upstream from Sparta	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Cumberland Pigtoe Jewel Darter
Caney Fork River Watershed Upstream from Highway 111	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Cumberland Pigtoe Jewel Darter
Portion of County South of Sparta, West of Hickory Valley Road, and East of Highway 136	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat
Falling Water River Floodplain	WHIP 13 (Tree Planting)	Gray Bat Indiana Bat

<u>Geographic Area</u>	<u>Practice(s) Applied</u>	<u>Species Benefited</u>
WILLIAMSON COUNTY		
Mill Creek Watershed	WHIP 2, 4 (Cropland Conversion) 11, 12, 13, 14 (Streambank)	Nashville Crayfish
Cedar Glades Only	WHIP 4, 6, 14	Leafy Prairie Clover Glade-cress Duck River Bladderpod
WILSON COUNTY		
Portion of County North of Coles Ferry Pike	WHIP 13 (Tree Planting)	Gray Bat
Countywide	WHIP 4, 5, 6, 9	Bewick's Wren
Cedar Glades Only	WHIP 4, 6, 14	Leafy Prairie Clover Glade-cress Spring Creek Bladderpod Tennessee Coneflower Glade Cleft Phlox

WHIP Priority Map



517.33

Conservation Practices

WHIP 1

Field Border

FOTG Practice Code 386

A. PURPOSE

The purpose of this practice is to establish a vegetative cover of native grasses/forbs, and/or shrubs that will provide wildlife food and cover benefits.

B. PROGRAM POLICY

Apply this practice to establish permanent wildlife habitat on field edges of cropland, pasture/hay land (primarily consisting of introduced grasses), idle grassy areas, and other land uses beneficial to wildlife.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined as needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Minerals

Eligible seed/plants

Seedbed preparation

Seeding/planting

Herbicide application

Temporary cover

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed and erosion problems may occur; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately; (d) on sites subject to erosion where natural regeneration will be the established cover.

E. REQUIREMENTS

The following are requirements for this practice:

1. The seeded area shall not be grazed by domestic livestock for the life of the Long-Term Contract. Native warm season grass stands may be harvested once per year, beginning with the third growing season. Native warm season grass stands may only be harvested between July 1 and August 15.
2. Herbicides used in performing the practice must be:
 - a. Federally, state, and locally registered, and
 - b. Applied according to authorized registered uses, directions on the label, and other federal or state policies and requirements.
3. A current soil test is required for all permanent herbaceous plantings; lime and fertilizer are NOT required for trees, shrubs or temporary cover.

F. PLANTING TIMESPAN

Planting or sowing after the WHIP Long-Term Contract is approved by the NRCS Contracting Office (Area Conservationist) shall be completed as scheduled in the Wildlife Habitat Development Plan unless the producer can provide acceptable documentation that seed stock is not available.

G. ENVIRONMENTAL CONCERNS

Consider other resource and environmental concerns (e.g. cultural, wetlands, etc.) as prescribed the National Environmental Policy Act and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

H. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

1. Participant destroys the cover during it's lifespan; or
2. Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

I. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

J. SPECIFICATIONS

Planned Widths	Field Borders shall be a minimum of 20 feet and a maximum of 120 feet.
Approved Cover	Natural regeneration is acceptable on B slopes or flatter areas (slopes of 5 percent or less). Natural regeneration is acceptable on C slopes (slopes of 5-12 percent) if sufficient ground cover is present to minimize soil erosion and other off-site environmental impacts. With natural regeneration, cost sharing shall be available for tame

grass eradication, temporary cover, and legume inter-seeding. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist.

For temporary cover (corn) with eastern gamagrass, plant corn at a 45 degree angle to the eastern gamagrass rows. Corn should be no-tilled. Plant 10 lbs eastern gama about April 1. Apply atrazine for corn, following label. Plant early maturing corn about June 1 at a rate of 12,000-16,000 (1/7 bu/ac) plants per acre. Harvest corn as early as possible.

Requirements	<p>Temporary cover is authorized. Corn is authorized as a temporary cover with eastern gamagrass only.</p> <p>A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.</p>
Seedbed	For conventionally planted herbaceous materials a firm seedbed is recommended. Prepare by plowing and disking (or harrowing) and allowed to settle. Prescribed burning (WHIP 10) may be used as a component for site preparation.
Herbicides	Apply herbicides in accordance with the label for tame grass eradication or when the no-till method of planting is used.

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Natural Regeneration	Temporary Cover, if needed	See temporary cover below
Natural Regeneration with Legume Interseeding – Kobe/Korean Lespedeza	15 lbs	Apr 15 – June 15
Eastern Gamagrass No-till Corn Temporary Cover	10.0 lbs 1/7 bu (12,000-16,000 corn plants/ac)	Dec 1-July 1

**Tall Grass Mixture
(Deer/Turkey)**

Big Bluestem	1.0 lb PLS <u>1/</u>	Dec 1 – July 1
Indian grass	1.0 lb PLS <u>1/</u>	
Little Bluestem	1.0 lb PLS <u>1/</u>	
Sideoats Grama	1.0 lb PLS <u>1/</u>	
Switchgrass	0.5 lb PLS <u>1/</u>	
Kobe/Korean Lespedeza	5.0 lbs	
OR		
Single or Mix of:		
Illinois Bundleflower		
Partridge Pea	1.0 lb	

**Short Grass Mixture
(Quail/Rabbit)**

Little Bluestem	3.0 lbs PLS <u>1/</u>	Dec 1 – July 1
Indiangrass	0.5 lb PLS <u>1/</u>	
Sideoats Grama	1.0 lb PLS <u>1/</u>	
Kobe/Korean Lespedeza	5.0 lbs	
OR		
Single or Mix of:		
Illinois Bundleflower		
Partridge Pea	1.0 lb	

Broadcast Planting Mixture

Switchgrass	8.0 lbs PLS <u>1/</u>	Apr 1 – July 1
(Cave-in-Rock, Blackwell)		
Kobe/Korean Lespedeza	5.0 lbs	

Cool Season Legume Mixture

Ladino Clover	4.0 lbs	Feb 20 – Apr 1
Red Clover	5.0 lbs	Aug 15 – Oct 1
Winter Wheat (Temp Cover)	25.0 lbs	

Shrub Establishment

Plantings may consist of single species of shrub lespedeza or 2 or more shrub species.

Shrub Lespedeza	12.0 lbs	Mar 1– June 1 <u>2/</u>
Spicebush	680 plants (8x8)	Nov 1 – Apr 1
Indigobush	680 plants (8x8)	Nov 1 – Apr 1
Wild Plum	680 plants (8x8)	Nov 1 – Apr 1

Chickasaw Plum	680 plants (8x8)	Nov 1 – Apr 1
Washington Hawthorne	680 plants (8x8)	Nov 1 – Apr 1
American Beautyberry	680 plants (8x8)	Nov 1 – Apr 1
Flowering Dogwood	302 plants (12x12)	Nov 1 – Apr 1
Crabapple	302 plants (12x12)	Nov 1 – Apr 1
Sawtooth Oak	302 plants (12x12)	Nov 1 – Apr 1
Persimmon	302 plants (12x12)	Nov 1 – Apr 1

Temporary Cover – Summer

Millet, White Proso	20.0 lbs	May 1 – July 1
Millet, Foxtail	20.0 lbs	May 1 - July 1
Buckwheat	30.0 lbs	May 1 – Aug 1
Corn (w/eastern gamagrass)	12,000-16,000 plts/ac	June 1

Temporary Cover – Winter

Crimson Clover	20.0 lbs	Aug 1 – Oct 1
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Wheat and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20
Rye and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20

1/ *PLS = Pure Live Seed*

2/ *VA-70, Amquail, Thunbergii varieties only*

A. PURPOSE

The purpose of this practice is to benefit aquatic wildlife species by establishing a vegetative cover of grasses/forbs that will filter sediment, nutrients, or other potential contaminants and provide food and cover for terrestrial wildlife.

B. PROGRAM POLICY

Apply this practice to cropland and pasture and hayland immediately adjacent and parallel to:

1. Streams having perennial flow,
2. Seasonal streams, excluding gullies and sod waterways,
3. Sinkholes, karst areas, and other ground water recharge areas, or
4. Wetlands permanently or semi-permanently inundated with surface water.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environmental benefits from recurring
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan
- Meet the following conditions for crop and pasture fields where a buffer area (woods or grassland) already exists between the water body and the cropland/pasture:
 - Where existing buffer is not adequate for obtaining the wildlife or aquatic resource objectives of the Wildlife Habitat Development Plan, an additional buffer may be established up to a total width of 120 feet.

D. COST SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan (WHDP). This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Minerals

Eligible Seed

Seedbed Preparation

Seeding

Herbicide Application

Temporary cover

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed and erosion problems may occur; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately; (d) on sites subject to erosion where natural regeneration will be the established cover (B-slopes, areas subject to scour erosion).

E. REQUIREMENTS

The following are requirements for this practice:

1. Filter strips shall be a minimum of 20 feet and a maximum of 120 feet.
2. The seeded area shall not be grazed by domestic livestock for the life of the Long-Term contract. Native warm season grass filter strips may be harvested once per year, beginning with the third growing season. Native warm season grass stands may only be harvested between July 1 and August 15.
3. Practice shall reduce nutrients, sediment, organic matter, pesticides, and other pollutants that are being delivered to receiving waters.
4. Chemicals used in performing the practice must be:
 - a. Federally, state, and locally registered
 - b. Applied according to authorized registered uses, directions on the label, and other federal or state policies and requirements.
5. A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

F. PLANTING TIMESPAN

Planting or sowing after the WHIP Long-Term Contract is approved by the NRCS Contracting Officer (Area Conservationist) shall be completed as scheduled in the Wildlife Habitat Development Plan, unless the producer can provide acceptable documentation that seed stock is not available.

G. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

H. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

1. Participant destroys the cover during its lifespan; or
2. Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

I. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

J. SPECIFICATIONS

Approved Cover	<p>Natural regeneration is acceptable on slopes with 0 – 2 percent slopes. With natural regeneration, cost sharing shall be available for tame grass eradication, temporary cover, or legume inter-seeding. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist.</p> <p>For temporary cover (corn) with eastern gamagrass, plant corn at 45 degree angle to the eastern gamagrass rows. Corn should be no-tilled. Plant 10 lbs eastern gama about April 1. Apply atrazine for corn, following label. Plant early maturing corn about June 1 at a rate of 12,000-16,000 (1/7 bu/ac) plants per acre. Harvest corn as early as possible.</p>
Requirements	<p>Temporary cover is authorized. Corn is authorized as a temporary cover for eastern gamagrass only.</p> <p>A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.</p>
Seedbed	<p>For conventionally planted materials a firm seedbed is recommended. Prepare by plowing and disking (or harrowing) and allowed to settle. Prescribed burning (WHIP 10) may be used as a component for site preparation.</p>
Herbicides	<p>Apply herbicides in accordance with the label for tame grass eradication or when the no-till method of planting is used.</p>

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Natural Regeneration	Temporary Cover If needed	See temporary cover below.
Natural Regeneration with Legume Interseeding: Kobe/Korean Lespedeza	15.0 lbs	Apr 15 – June 15
Eastern Gamagrass No-till Corn (Temporary Cover)	10.0 lbs 1/7 bu (12,000-16,000 corn plants/ac)	Dec 1 – July 1*
Tall Grass Mixture (Deer/Turkey)		
Big Bluestem	1.0 lb PLS <u>1/</u>	Dec 1 – July 1
Indian grass	1.0 lb PLS <u>1/</u>	
Little Bluestem	1.0 lb PLS <u>1/</u>	
Sideoats Grama	1.0 lb PLS <u>1/</u>	
Switchgrass	0.5 lb PLS <u>1/</u>	
Kobe/Korean Lespedeza	5.0 lbs	
OR		
Single or Mix of: Illinois Bundleflower Partridge Pea	1.0 lb	
Short Grass Mixture (Quail/Rabbit)		
Little Bluestem	3.0 lbs PLS <u>1/</u>	Dec 1 – July 1
Indiangrass	0.5 lb PLS <u>1/</u>	
Sideoats Grama	1.0 lb PLS <u>1/</u>	
Kobe/Korean Lespedeza	5.0 lbs	
OR		
Single or Mix of: Illinois Bundleflower Partridge Pea	1.0 lb	
Broadcast Planting Mixture		
Switchgrass (Cave-in-Rock, Blackwell)	8.0 lbs PLS <u>1/</u>	Apr 1 – July 1
Kobe/Korean Lespedeza	5.0 lbs	
Temporary Cover – Summer		
Millet, White Proso	20.0 lbs	May 1 – July 1

Millet, Foxtail	20.0 lbs	May 1 - July 1
Buckwheat	30.0 lbs	May 1 – Aug 1
Corn (w/eastern gamagrass only)	12,000-16,000 plts/ac	June 1
Temporary Cover – Winter		
Crimson Clover	20.0 lbs	Aug 1 – Oct 1
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Wheat and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20
Rye and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20

1/ *PLS = Pure Live Seed*

A. PURPOSE

The purpose of this practice is to establish a vegetative cover of native forbs or legumes that will provide wildlife food benefits.

B. PROGRAM POLICY

Apply this practice to establish permanent wildlife habitat on cropland, pasture/hay-land, woodland openings, or idle grassy areas.

C. ELIGIBILITY

To be eligible for cost-share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan (WHDP). This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Minerals
Eligible Seed
Cover Crop Establishment
Seedbed Preparation
Seeding
Herbicide Application

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed and erosion problems may occur; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately.

E. REQUIREMENTS

The following are requirements for this practice:

1. Each perennial food plot shall not be less than $\frac{1}{4}$ acre nor more than 3.0 acres in size.
2. The maximum acreage allowed for perennial food plots in the Wildlife Habitat Development Plan shall not exceed 10 percent of the open land acres in the treatment unit.

3. The seeded area shall not be harvested or grazed by domestic livestock for the life of the long-term contract.
4. Herbicides used in performing the practice must be:
 - a. Federally, state, and locally registered
 - b. Applied according to authorized registered uses, directions on the label, and other federal or state policies and requirements.
5. A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

F. PLANTING TIMESPAN

Planting or sowing after the WHIP Long-Term Contract is approved by the NRCS Contracting Officer (Area Conservationist) shall be completed as scheduled in the Wildlife Habitat Development Plan unless the producer can provide acceptable documentation that seed stock is not available.

G. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

H. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

1. Participant destroys the cover during its lifespan; or
2. Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

I. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

J. SPECIFICATIONS

Approved Cover	Substitutions of plant species may be allowed subject to prior approval by the WHIP program leader or state biologist.
----------------	--

Requirements	Temporary cover is authorized.
--------------	--------------------------------

A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

Seedbed	For conventionally planted materials a firm seedbed is recommended. Prepare by plowing and disking (or
---------	--

harrowing) and allowed to settle. Prescribed burning (WHIP 10) may be used as a component for site preparation.

Herbicides Apply herbicides in accordance with the label for tame grass eradication or when the no-till method of planting is used.

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Reseeding Soybean	20.0 lbs	Apr 15 – June 15
Illinois Bundleflower	12.0 lbs	Apr 1 – June 1
Kobe Lespedeza	20.0 lbs	Apr 15 – June 15
Korean Lespedeza	20.0 lbs	Apr 15 – June 15
Partridge Pea	12.0 lbs	Apr 1 – June 1
Dry Site Mixture		
Red Clover	7.0 lbs	Feb 20 – Apr 1
Chicory	2.0 lbs	Aug 15 – Oct 1
Crimson Clover (temporary cover)	5.0 lbs	
Winter Wheat (temporary cover)	25 lbs	
Moist Site Mixture		
Ladino Clover	4.0 lbs	Feb 20 – Apr 1
Alsike Clover	5.0 lbs	Aug 15 – Apr 1
Berseem Clover (temporary cover)	5.0 lbs	
Winter Wheat (temporary cover)	25.0 lbs	

WHIP 4**Permanent Wildlife Planting****FOTG Practice Code 645****A. PURPOSE**

The purpose of this practice is to establish a vegetative cover of native grasses/forbs that provide wildlife food and cover benefits.

B. PROGRAM POLICY

Apply this practice to establish permanent wildlife habitat on cropland, pasture/hay land consisting of primarily introduced grasses, idle grassy areas, or permanent wildlife openings within woodlands.

C. ELIGIBILITY

To be eligible for cost-share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan (WHDP). This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Minerals

Eligible Seed

Seedbed Preparation

Seeding

Herbicide Application

Temporary Cover (Cover Crop)

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed and erosion problems may occur; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately.

E. REQUIREMENTS

The following are requirements for this practice:

1. The seeded area shall not be grazed by domestic livestock for the life of the Long-Term Contract. Native warm season grass stands may be harvested once per year, beginning with the third growing season. Native warm season grass stands may only be harvested between July 1 and August 15.

2. Herbicides used in performing the practice must be:
 - a. Federally, state, and locally registered.
 - b. Applied according to authorized registered uses, directions on the label, and other federal or state policies and requirements.
3. A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

F. PLANTING TIMESPAN

Planting or sowing after the WHIP Long-Term Contract is approved by the NRCS Contracting Officer (Area Conservationist) shall be completed as scheduled in the Wildlife Habitat Development Plan unless the producer can provide acceptable documentation that seed stock is not available.

G. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

H. PRACTICE MAINTENANCE

This practice shall be maintained without additional federal cost share for the expected lifespan of the practice, with the exception of prescribed burns. Prescribed burns may be cost shared after establishment of this practice to rejuvenate native warm season grass/forb mixtures (see WHIP Prescribed Burning practice for requirements), and will not be considered a maintenance practice.

Cost share shall be refunded if either of the following applies:

1. Participant destroys the cover during its lifespan; or
2. Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

I. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

J. SPECIFICATIONS

Approved Cover	Natural regeneration is acceptable on B slopes or flatter areas (slopes of 5 percent or less). Natural regeneration is acceptable on C slopes (slopes of 5-12 percent), if sufficient ground cover is present to minimize soil erosion and other off-site environmental impacts. With natural regeneration, cost sharing shall be available for tame grass eradication, temporary cover, or legume
----------------	--

inter-seeding. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist.

For temporary cover (corn) with eastern gamagrass, plant corn at 45 degree angle to the eastern gamagrass rows. Corn should be no-tilled. Plant 10 lbs eastern gamagrass about April 1. Apply atrazine for corn, following label. Plant early maturing corn about June 1 at a rate of 12,000-16,000 (1/7 bu/ac) plants per acre. Harvest corn as early as possible.

Requirements	<p>Temporary cover is authorized. Corn is authorized as a temporary cover with eastern gamagrass only.</p> <p>A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.</p>
Seedbed	For conventionally planted materials a firm seedbed is recommended. Prepare by plowing and disking (or harrowing) and allowed to settle. Prescribed burning (WHIP 10) may be used as a component for site preparation.
Herbicides	Apply herbicides in accordance with the label for tame grass eradication or when the no-till method of planting is used.

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Natural Regeneration	Temporary Cover If needed	
Natural Regeneration with Legume Interseeding: Kobe/Korean Lespedeza	15.0 lbs	Apr 15 – June 15
Eastern Gamagrass No-till Corn (Temporary Cover) (12,000-16,000 corn plants/ac)	10.0 lbs 1/7 bu	Dec 1 – July 1
Tall Grass Mixture (Deer/Turkey)		
Big Bluestem	1.0 lb PLS <u>1/</u>	Dec 1 – July 1

Indian grass	1.0 lb PLS <u>1/</u>
Little Bluestem	1.0 lb PLS <u>1/</u>
Sideoats Grama	1.0 lb PLS <u>1/</u>
Switchgrass	0.5 lb PLS <u>1/</u>
Kobe/Korean Lespedeza	5.0 lbs

OR

Single or Mix of:	
Illinois Bundleflower	
Partridge Pea	1.0 lb

**Short Grass Mixture
(Quail/Rabbit)**

Little Bluestem	3.0 lbs PLS <u>1/</u>	Dec 1 – July 1
Indiangrass	0.5 lb PLS <u>1/</u>	
Sideoats Grama	1.0 lb PLS <u>1/</u>	
Kobe/Korean Lespedeza	5.0 lbs	

OR

Single or Mix of:	
Illinois Bundleflower	
Partridge Pea	1.0 lb

Broadcast Planting Mixture

Switchgrass (Cave-in-Rock, Blackwell)	8.0 lbs PLS <u>1/</u>	Apr1 – July 1
Kobe/Korean Lespedeza	5.0 lbs	

Temporary Cover – Summer

Millet, White Proso	20.0 lbs	May 1 – July 1
Millet, Foxtail	20.0 lbs	May 1 - July 1
Buckwheat	30.0 lbs	May 1 – Aug 1
Corn (w/eastern gamagrass)	12,000-16,000 plts/ac	June 1

Temporary Cover – Winter

Crimson Clover	20.0 lbs	Aug 1 – Oct 1
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Wheat and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20
Rye and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20

1/ *PLS = Pure Live Seed*

WHIP 5 Hedgerow/Wildlife Corridor

FOTG Practice Codes 422, 340

A. PURPOSE

The purpose of this practice is to establish a vegetative cover (living fence) of shrubs or trees in, around or across fields that will provide wildlife food and cover benefits and serve as a wildlife corridor to facilitate animal movements.

B. PROGRAM POLICY

Apply this practice to establish permanent wildlife habitat on field edges of cropland or grassland, or to connect areas of good cover across areas of poor cover.

C. ELIGIBILITY

To be eligible for cost-share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan
- Include woody vegetation determined suitable to meet wildlife needs.

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan (WHDP). This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Trees

Shrubs

Planting Costs

Herbicide Application

Temporary Cover

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed and erosion problems may occur; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately.

E. REQUIREMENTS

The following are requirements for this practice:

1. Plantings must be protected from destructive fire and shall not be harvested or grazed by domestic livestock for the life of the Long-Term Contract.
2. Chemicals used in performing the practice must be:
 - a. Federally, state, and locally registered.
 - b. Applied according to authorized registered uses, directions on the label, and other federal or state policies and requirements.
3. A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

F. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

G. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

1. Participant destroys the cover during it's lifespan; or
2. Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

H. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

I. SPECIFICATIONS

Planned Width Hedgerows/wildlife corridors shall be a minimum width of 20 feet and a maximum of 50 feet.

Approved Cover Approved plant materials are listed below. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist. Shrub lespedeza may be planted as a single species. A mixture of two or more species is required for shrub and tree species plantings. Bare root apple trees are allowed only in blocks of ¼ acre or less.

Lime and fertilizer is not required for shrub and tree plantings or temporary cover.

Seedbed For conventionally planted herbaceous materials a firm seedbed is recommended. Prepare by plowing and disking (or harrowing) and allowed to settle. Prescribed burning (WHIP 10) may be used as a component for site

preparation.

Herbicides Apply herbicides in accordance with the label for tame grass eradication or when the no-till method of planting is used.

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Spicebush	680 plants (8x8)	Nov 1 – Apr 1
Indigobush	680 plants (8x8)	Nov 1 – Apr 1
Wild Plum	680 plants (8x8)	Nov 1 – Apr 1
Chickasaw Plum	680 plants (8x8)	Nov 1 – Apr 1
American Beautyberry	680 plants (8x8)	Nov 1 – Apr 1
Chokeberry	680 plants (8x8)	Nov 1 – Apr 1
Flowering Dogwood	302 plants (12x12)	Nov 1 – Apr 1
Sawtooth Oak	302 plants (12x12)	Nov 1 – Apr 1
Crabapple	302 plants (12x12)	Nov 1 – Apr 1
Washington Hawthorne	302 plants (12x12)	Nov 1 – Apr 1
Serviceberry	302 plants (12x12)	Nov 1 – Apr 1
Staghorn Sumac	302 plants (12x12)	Nov 1 – Apr 1
Persimmon	302 plants (12x12)	Nov 1 – Apr 1
Pin Oak	302 plants (12x12)	Nov 1 – Apr 1
Cherrybard Oak	302 plants (12x12)	Nov 1 – Apr 1
Nuttall Oak	302 plants (12x12)	Nov 1 – Apr 1
Northern Red Oak	302 plants (12x12)	Nov 1 – Apr 1
Shrub Lespedeza (VA 70, Amquail, Thunbergii only)	12.0 lbs	Mar 1 – June 1
Eastern Red cedar	302 plants (12x12)	Nov 1 – Apr 1
Virginia Pine	302 plants (12x12)	Nov 1 – Apr 1
White Pine	302 plants (12x12)	Nov 1 – Apr 1
Shortleaf Pine	302 plants (12x12)	Nov 1 – Apr 1
Apple Tree Bare Root (1/4 ac block or less)	109 plants (20x20)	Nov 1 – Apr 1
Temporary Cover – Summer		
Millet, White Proso	20.0 lbs	May 1 – July 1
Millet, Foxtail	20.0 lbs	May 1 - July 1
Buckwheat	30.0 lbs	May 1 – Aug 1
Temporary Cover – Winter		
Crimson Clover	20.0 lbs	Aug 1 – Oct 1
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20

Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Wheat and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20
Rye and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20

WHIP 6

Forest Wildlife Opening

FOTG Practice Code 645

A. PURPOSE

The purpose of this practice is to establish a permanent opening of primarily herbaceous vegetation and shrubs within woodland areas to provide food and cover benefits for early succession and upland wildlife species. Both *forest openings* (J1 specifications) and *edge feathering* (J2 specifications) are included in this WHIP practice.

B. PROGRAM POLICY

Apply this practice to woodlands.

C. ELIGIBILITY

To be eligible for cost-share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan
- Be applied to a minimum contiguous 10 acre tract of woodland (Forest Openings only).

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan (WHDP). This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Land Clearing

Minerals

Eligible Seed

Seedbed Preparation

Seeding

Shrub/Small Tree Seedlings (Forest Openings only)

Labor

Herbicide Application

Temporary Cover

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed and erosion problems may occur; (c) needed because of a soil condition such as chemical

residue that will not allow establishment of cover immediately; (d) on sites subject to erosion where natural regeneration will be the established cover.

Forest wildlife openings (excluding edge feathering areas) are limited for cost share to 1 acre per 10 acres of woodland within the treatment unit. The minimum acreage of contiguous woodland to qualify for forest openings is 10 acres. Applicants may receive cost share for an opening within a woodland treatment unit of less than 10 acres when the applicant's woodland is part of a larger off-site (>10 acres) woodland.

E. REQUIREMENTS

The following are requirements for this practice:

1. The seeded area shall not be grazed by domestic livestock for the life of the Long-Term Contract. Native warm season grass stands may be harvested once per year, beginning with the third growing season. Native warm season grass stands may only be harvested between July 1 and August 15.
2. Chemicals used in performing the practice must be:
 - a. Federally, state, and locally registered.
 - b. Applied according to authorized registered uses, directions on the label, and other federal or state policies and requirements.
3. A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

F. PLANTING TIMESPAN

Planting or sowing after the WHIP Long-Term Contract is approved by the NRCS Contracting Officer (Area Conservationist) shall be completed within the next full planting season after the clearing activity, unless the producer can provide acceptable documentation that seed stock/shrub seedlings are not available.

G. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

H. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

1. Participant destroys the cover during its lifespan; or
2. Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

I. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

J(1). SPECIFICATIONS – **FOREST OPENING**

The following specifications apply to “Forest Opening” only. “Edge feathering” specifications follow Forest Opening specifications.

Planned Width	Each permanent wildlife opening shall not be less than $\frac{1}{4}$ acre nor more than 5 acres in size (limited to 1 acre per 10 acres).
Site Selection	Permanent wildlife openings are limited to slopes of 12 percent or less and non-wetland (NW) sites. Erosion must be controlled at all times during installation of this practice. Linear or block openings shall be a minimum of 50 feet wide. Circular openings shall have a minimum diameter of 120 feet.
Approved Cover	<p>Natural regeneration is acceptable on B slopes or flatter areas (slopes of 5 percent or less). With natural regeneration, cost sharing shall only be available for temporary cover or legume inter-seeding. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist.</p> <p>For temporary cover (corn) with eastern gamagrass, plant corn at 45 degree angle to the eastern gamagrass rows. Corn should be no-tilled. Plant 10 lbs eastern gamagrass about April 1. Apply atrazine for corn, following label. Plant early maturing corn about June 1 at a rate of 12,000-16,000 (1/7 bu/ac) plants per acre. Harvest corn as early as possible.</p>
Requirements	<p>Temporary cover is authorized. Corn is authorized as a temporary cover with eastern gamagrass only.</p> <p>When planting shrub lespedeza, a maximum $\frac{1}{4}$ acre plot is allowed. Varieties to be used are <i>VA-70</i>, <i>Amquail</i>, or <i>Thunbergii</i></p> <p>A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.</p>
Seedbed	For conventional herbaceous planting, a firm seedbed is recommended. Prepare by plowing and disking (or harrowing) and allow to settle. Prescribed burning (WHIP 10) may be used for site preparation.

Herbicides

Apply herbicides in accordance with the label.

<u>Eligible Seeds for Forest Openings</u>	<u>Seeding Rates</u>	<u>Seeding Dates (per acre)</u>
Natural Regeneration	Temporary Cover If needed	
Natural Regeneration with Kobe/Korean Lespedeza Interseeding	15.0 lbs	Apr 15 – June 15
Reseeding Soybean (Quailhaven)	20.0 lbs	Apr 15 – June 15
Kobe Lespedeza	20.0 lbs	Apr 15 – June 15
Korean Lespedeza	20.0 lbs	Apr 15 – June 15
Partridge Pea	12.0 lbs	Apr 15 – June 1
Eastern Gamagrass	10.0 lbs	Dec 1 – July 1
No-till Corn (Temporary Cover)	1/7 bu (12,000-16,000 corn plants/ac)	
Tall Grass Mixture (Deer/Turkey)		
Big Bluestem	1.0 lb PLS <u>1/</u>	Dec 1 – July 1
Indian grass	1.0 lb PLS <u>1/</u>	
Little Bluestem	1.0 lb PLS <u>1/</u>	
Sideoats Grama	1.0 lb PLS <u>1/</u>	
Switchgrass	0.5 lb PLS <u>1/</u>	
Kobe/Korean Lespedeza	5.0 lbs	
OR		
Single or Mix of:		
Illinois Bundleflower		
Partridge Pea	1.0 lb	
Short Grass Mixture (Quail/Rabbit)		
Little Bluestem	3.0 lbs PLS <u>1/</u>	Dec 1 – July 1
Indiangrass	0.5 lb PLS <u>1/</u>	
Sideoats Grama	1.0 lb PLS <u>1/</u>	
Kobe/Korean Lespedeza	5.0 lbs	
OR		
Single or Mix of:		

Illinois Bundleflower		
Partridge Pea	1.0 lb	
Broadcast Planting Mixture		
Switchgrass (Cave-in-Rock, Blackwell)	8.0 lbs PLS <u>1/</u>	Apr 1 – July 1
Kobe/Korean Lespedeza	5.0 lbs	
Dry Site Mixture		
Red Clover	7.0 lbs	Feb 20 – Apr 1
Chicory	2.0 lbs	Aug 15 – Oct 1
Crimson Clover (temporary cover)	5.0 lbs	
Winter Wheat (temporary cover)	25 lbs	
Moist Site Mixture		
Ladino Clover	4.0 lbs	Feb 20 – Apr 1
Alsike Clover	5.0 lbs	Aug 15 – Apr 1
Berseem Clover (temporary cover)	5.0 lbs	
Winter Wheat (temporary cover)	25.0 lbs	
Temporary Cover – Summer		
Millet, White Proso	20.0 lbs	May 1 – July 1
Millet, Foxtail	20.0 lbs	May 1 - July 1
Buckwheat	30.0 lbs	May 1 – Aug 1
Corn (w/eastern gamagrass only)	12,000-16,000 plts/ac	June 1
Temporary Cover – Winter		
Crimson Clover	20.0 lbs	Aug 1 – Oct 1
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Wheat and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20
Rye and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20
Shrub/Small Tree Establishment for Forest Openings: Plantings may consist of a single species for shrub lespedeza or mixtures of species.		
Shrub Lespedeza*	12.0 lbs	Mar 1 – June 1
Indigobush	680 plants (8x8)	Nov 1 – Apr 1

Wild Plum	680 plants (8x8)	Nov 1 – Apr 1
Chickasaw Plum	680 plants (8x8)	Nov 1 – Apr 1
Spicebush	680 plants (8x8)	Nov 1 – Apr 1
American Beautyberry	680 plants (8x8)	Nov 1 – Apr 1
Chokeberry	680 plants (8x8)	Nov 1 – Apr 1
Persimmon	302 plants (12x12)	Nov 1 – Apr 1
Dogwood	302 plants (12x12)	Nov 1 – Apr 1
Crabapple	302 plants (12x12)	Nov 1 – Apr 1
Apple (max ¼ ac)	302 plants (12x12)	Nov 1 – Apr 1
Pines – Loblolly, White, Virginia	302 plants (12x12)	Nov 1 – Apr 1

1/ *PLS = Pure Live Seed*

* *one-fourth acre only VA-70, Amquail, Thunbergii*

J(2). SPECIFICATIONS – **EDGE FEATHERING**

Planned Width	Woodland will have the edge opened up to increase sunlight reaching forest floor. Minimum width shall be 50 feet; maximum width shall be 120 feet.
Site Selection	The site shall be immediately adjacent to a field or road. The site should encourage grasses and shrub growth. Erosion must be controlled at all times during installation of this practice.
Approved Cover	Natural regeneration is acceptable on all slopes. Tree and shrub planting is NOT approved for Edge Feathering.
Requirements	The Edge Feathering area will be divided into 3 zones; each zone will be approximately 33% of the total width. <u>Zone A</u> will be nearest a field edge or road. The area should be thinned with 75% of the total vegetation removed.

Zone B will have 50% of the total vegetation removed.

Zone C will have 25% of the total vegetation removed. There should be no defined edge between Zone C and the existing woodland.

All Zones: Stumps of undesirable species should be treated with an approved herbicide to prevent re-sprouting. Native desirable species such as dogwood and plum should be left undamaged. Sod forming grasses such as tall fescue and Bermuda grass should be eradicated by herbicides prior to starting edge feathering practice.

Herbicides

Apply approved herbicides in accordance with the label.

A. PURPOSE

The purpose of this practice is to establish a source of water for wildlife.

B. PROGRAM POLICY

Apply this practice within croplands, pastures, hay lands, idle grassy areas, or woodlands where year-round surface water supplied are insufficient to meet wildlife needs.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Be the only source of year round surface water available for wildlife within 1,500 feet of the proposed pond site.
- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan

D. COST SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Earthmoving

Minerals

Eligible Seed

Mulch

Temporary Cover

This practice shall have a cost share dollar limit not to exceed \$1500 provided to an applicant per pond.

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed and erosion problems may occur; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately.

E. REQUIREMENTS

The following are requirements for this practice:

1. The constructed pond shall not be directly accessible to domestic livestock. Surplus water may be delivered to a livestock tank or trough below the dam site at landowner's expense.
2. All disturbed areas including dam, shoreline, and within pool area shall be seeded immediately after construction activities are completed.
3. The seeded area shall not be harvested or grazed by domestic livestock for the life of the Long Term Contract.
4. A current soil test is required for all permanent herbaceous plantings.

F. ENVIRONMENTAL CONCERNS

Consider other resource and environmental concerns (e.g. Cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

G. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

1. Participant destroys the cover or structure during its lifespan; or
2. Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

H. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

I. SPECIFICATIONS

Requirements	Temporary cover is authorized within the pool area of the pond as well as the dam and spillway. Apply the NRCS FOTG Standard for Critical Area Planting for seeding of dam and spillway. If needed, apply mulch as recommended by the NRCS FOTG Conservation practice standard Code 342.
Design	Pond shall be constructed in accordance with pond standard and specification (378) in the FOTG.
Seedbed	Hard-pack areas shall be disked at least twice prior to seeding.

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Switchgrass Kobe/Korean Lespedeza*	10 lb (PLS <u>1/</u>) 5.0 lbs	Apr 15 – July 1
Switchgrass	15.0 lbs (PLS <u>1/</u>)	Apr 15 – July 1
Temporary Cover – Summer		
Millet, Brown-top	40.0 lbs	May 1 – July 1
Millet, Foxtail	20.0 lbs	May 1 - July 1
Sudan-grass	30.0 lbs	Apr 1 – July 1
Sudan Hybrids	30.0 lbs	Apr 1 – July 1
Temporary Cover – Winter		
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Annual Ryegrass	20.0 lbs	Aug 15 – Oct 15

1/ PLS = Pure Live Seed

* Japanese millet may be substituted in wetter areas.

WHIP 8**Wildlife Watering Facility****FOTG Practice Code 648****A. PURPOSE**

The purpose of this practice is to establish a source of drinking water for wildlife.

B. PROGRAM POLICY

Apply this practice within croplands, pastures, hay-lands, idle grassy areas, or woodlands where year round surface water supplies are insufficient to meet wildlife needs.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Be the only source of year round surface water available for wildlife within 1,500 feet of the proposed wildlife watering facility site
- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Earthmoving

Minerals

Eligible Seed

Mulch

Temporary Cover

This practice has a maximum cost-share dollar limit of \$375 provided to an applicant per watering facility.

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed and erosion problems may occur; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately.

E. REQUIREMENTS

The following are requirements for this practice:

1. The constructed wildlife watering facility shall not be directly accessible to domestic livestock.

2. All disturbed areas shall be seeded immediately after construction activities are completed.
3. The seeded area shall not be harvested or grazed by domestic livestock for the life of the long term contract.
4. Apply the NRCS FOTG Standard for Critical Area Planting for seeding of dam and spillway.

F. ENVIRONMENTAL CONCERNS

Consider other resource and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations. A TN-CPA 25 must be completed for each WHDP.

G. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

- Participant destroys the cover or structure during it's lifespan; or
- Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

H. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

I. SPECIFICATIONS

Requirements Temporary cover is authorized within the dugout area as well as the dam and spillway. Apply the NRCS FOTG Standard for Critical Area Planting (Code 342) for seeding of dam and spillway.

If needed, apply mulch as recommended by the FOTG Conservation practice standard Code 342.

Design Wildlife watering facility shall be constructed in accordance with standard and specification 648 in the FOTG (minimum 1,600 square foot surface area, maximum of 4 feet deep, etc)

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Switchgrass	10.0 lbs	Apr 1 – July 1
Kobe/Korean Lespedeza*	5.0 lbs	
Switchgrass	15.0 lbs (PLS <u>1/</u>)	Apr 1 – July 1
Temporary Cover – Summer		
Millet, Brown-top	40.0 lbs	May 1 – July 1
Millet, Foxtail	20.0 lbs	May 1 - July 1
Sudan-grass	30.0 lbs	Apr 1 – July 1
Sudan Hybrids	30.0 lbs	Apr 1 – July 1
Temporary Cover – Winter		
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Annual Ryegrass	20.0 lbs	Aug 15 – Oct 15

1/ PLS = Pure Live Seed

* Japanese millet may be substituted on wetter sites.

A. PURPOSE

The purpose of this practice is

- to reduce grass density and encourage forbs and legumes to regenerate for wildlife food;
- establish legumes or wildflowers to provide food and cover for wildlife;
- establish a firebreak for conducting a prescribed burn.

B. PROGRAM POLICY

Apply this practice to grasslands and idle grassy areas where hard seeded native forbs may respond or where a prescribed burn requires a firebreak and a permanent green firebreak is not appropriate.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan.

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Disking

Eligible Seed

Seeding

Herbicide Application

Cost share shall be applicable to all strip disking treatments scheduled in the WHIP Contract under the limitation that strip disking of the same acreage shall not be more frequent than once every three years during the length of the Contract.

E. REQUIREMENTS

The following are requirements for this practice:

1. The disked area shall not be grazed by domestic livestock for the life of the long-term contract.
2. Strip disking shall be done outside the primary nesting season of April 15 to August 15.

3. Native warm season grass stands shall not be disked until after the second full growing season with the exception of areas planned for disked firebreaks.
4. Strip disking shall be restricted to slopes of less than 8 percent and be placed on the contour at all times.
5. No more than one-third of a field may be disked in any given year. Disked areas may not be re-disked the following two years. Disked strips shall be a minimum width of 20 feet, next to exceed 50 feet. Disked strips shall be separated by undisturbed strips at least two times the width of the disked strip.
6. A current soil test is required for all permanent herbaceous plantings.

F. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

G. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

- Participant destroys the cover or structure during its lifespan; or
- Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

H. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

I. SPECIFICATIONS

1. Select areas near protective cover (within 150 feet). Protective cover includes woodlands, idle grassy areas, well established native warm season grass plantings, and shrub stands.
2. Disked areas should be disked between the dates of Sept 1 – Apr 15.
3. Disked areas should not be mowed in the years between re-disking, unless being harvested for hay. Native warm season grass stands may be harvested once per year beginning with the third growing season. Native warm season grass stands may only be harvested between July 1 and August 15.
4. Strips may be mowed prior to disking to facilitate the ease of disking.

Approved Cover

Approved plant materials are listed below. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist.

Eligible Seeds

Seeding Rates

Seeding Dates

	<u>(per acre)</u>	
Kobe/Korean Lespedeza	15.0 lbs	Apr 1 – June 15
Ladino Clover	4.0	Feb 20 – Apr 1 Aug 15 – Oct 1
Wildflowers (see list below)	2.0 lbs	Apr 1 – June 1

Choose at least two of the following species:

Blackeyed Susan	Illinois Bundleflower
Purple Coneflower	Cosmos
Corn Poppy	Upright Coneflower
Purple Prairie Coneflower	Plains Coreopsis
Lanceleaf Coreopsis	Shasta Daisy
California Poppy	Partridge Pea

A. PURPOSE

The purpose of this practice is to reduce grass density and encourage forbs and legumes for wildlife food.

B. PROGRAM POLICY

Apply this practice to native warm season grasslands and idle grassy areas where hard seeded native forbs may respond.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan.

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Prescribed Burning
Disking
Labor
Eligible Seed
Seedbed Preparation
Seeding
Temporary Cover

The disking component of this practice shall meet the requirements of the WHIP 9 practice (strip disking).

Cost-share shall be applicable for conducting prescribed burns for all scheduled treatments in the WHIP Contract under the limitation that a prescribed burn of the same acreage shall not be more frequent than once every three years during the length of the Contract.

Cost share is authorized only for the initial establishment of a permanent green firebreak. Cost share is NOT AUTHORIZED for the establishment of a green firebreak around fields smaller than two acres.

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed and erosion problems may occur; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately;

E. REQUIREMENTS

The following are requirements for this practice:

1. The burned area shall not be grazed by domestic livestock for the life of the Long-Term Contract.
2. Prescribed burns shall be done outside the primary nesting season of April 15 to August 15. Prescribed burns shall be restricted to a period between December 1 and April 15.
3. No more than one-third of the contract acres established to warm season grasses or natural vegetation may be burned in any given year. Areas burned may not be burned again the following two years. Prescribed burns will be carried out according to the Tennessee Division of Forestry guidelines. Landowners are required to obtain a burning permit from the Tennessee Division of Forestry as required and must follow all other applicable EPA, state, or local restrictions. Landowners are responsible for obtaining a qualified burn team.
4. A current soil test is required for all permanent herbaceous plantings.

F. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

G. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

- Participant destroys the cover or structure during it's lifespan; or
- Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

H. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

I. SPECIFICATIONS

Planned Widths	Green firebreaks shall have a minimum width of 20 feet, not to exceed a maximum of 50 feet.
----------------	---

Approved Cover	Approved plant materials are listed below. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist.
Requirements	A current soil test is required for all permanent herbaceous plantings.
Management	Mowing to reduce old growth of green firebreaks is permissible. Haying of green firebreaks is allowed prior to the scheduled burn.
Seedbed	For conventional plantings, a firm seedbed is recommended. It should be prepared by plowing and disking (or harrowing) and allowed to settle.

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Ladino Clover	4.0 lbs	Feb 20 – Apr 1
Red Clover	5.0 lbs	Aug 15 – Oct 1
Winter Wheat (temporary cover)	25.0 lbs	

A. PURPOSE

The purpose of this practice is to remove nutrients, sediment, and other pollutants from surface runoff by deposition, absorption, plant uptake, denitrification, and other processes, thereby improving water quality. The practice will create shade, lowering water temperature and providing a source of detritus and large woody debris for aquatic organisms.

B. PROGRAM POLICY

Apply this practice to cropland or grasslands immediately adjacent and parallel to:

1. Streams having perennial flow.
2. Seasonal streams, excluding gullies and sod waterways.
3. Sinkholes, karst areas, and other ground water recharge areas.
4. Wetlands permanently or semi-permanently inundated with surface water.
5. Ponds and lakes.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan
- For crop and grassland fields where a buffer area (woods or grassland) already exists between the water body and the field, the following applies:
 - a. If the existing wooded buffer is 30 percent or more of the geomorphic floodplain, or a minimum of 150 feet, cost share is NOT AUTHORIZED.
 - b. If the existing wooded buffer is less than 30 percent of the geomorphic floodplain, cost share IS AUTHORIZED to extend the existing wooded buffer up to 30 percent of the geomorphic floodplain, or a maximum of 150 feet, whichever is less.

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

Trees

Shrubs

Planting Costs

Minerals

Eligible Seed
Seedbed Preparation
Herbicide Application
Temporary Cover

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately; (d) needed on class I soils when natural regeneration of herbaceous vegetation is planned.

E. REQUIREMENTS

The following are requirements for this practice.

1. Riparian forest buffers shall be a minimum of 30 percent of the geomorphic floodplain. The riparian width shall not be less than 35 feet or wider than a maximum of 150 feet. The geomorphic flood plan is determined by one of two methods:
 - a. The width of the floodplain as identified from the soil survey as bottomland and first stream terrace soils.
 - b. The width of the floodplain as identified from a USGS quadrangle map where ridge contours (steepness) begins.

Example:

Geomorphic floodplain = 120 feet (one side of stream)

$0.3 \times 120 = 36$ feet

Geomorophic floodplain = 500 feet (one side of stream)

$0.3 \times 500 = 150$ feet

2. The riparian forest buffer may consist of all three zones. Zones 1 and 2 shall be required and meet the minimum width of 35 feet. Zone 3 shall be optional and cannot be less than 15 feet or wider than 30 feet. Zone 3 must be established to native warm season grass/forb mixtures.
3. The planted area shall not be harvested or grazed by domestic livestock for the life of the long term contract.
4. Practice shall reduce nutrients, sediment, organic matter, pesticides, and other pollutants that are being delivered to receiving waters.
5. Herbicides used in performing the practice must be:
 - a. Federally, state, and locally registered
 - b. Applied according to authorized registered uses, directions on the label, and other federal or state policies and requirements.
6. A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

F. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

G. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

- Participant destroys the cover or structure during it's lifespan; or
- Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

H. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

I. SPECIFICATIONS

Approved Cover Natural regeneration of herbaceous vegetation is an acceptable cover on capability classes I and II soils. With natural regeneration, cost sharing shall only be available for tame grass eradication and a temporary cover, if needed. Areas other than natural regeneration planted to trees and shrubs shall also be eligible for cost share. Approved plant materials are listed below. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist.

For temporary cover (corn) with eastern gamagrass, plant corn at 45 degree angle to the eastern gamagrass rows.

Corn should be no-tilled. Plant 10 lbs eastern gama about April 1. Apply atrazine for corn, following label.

Plant early maturing corn about June 1 at a rate of 12,000-16,000 (1/7 bu/ac) plants per acre. Harvest corn as early as possible.

Requirements Temporary cover, when required, is authorized. Corn is authorized as a temporary cover when planted with eastern gamagrass only.

A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

Seedbed For conventional plantings, a firm seedbed is

recommended. It should be prepared by plowing and disking (or harrowing) and allowed to settle. For conventionally planted materials a firm seedbed is recommended. Prepare by plowing and disking (or harrowing) and allowed to settle. Prescribed burning (WHIP 10) may be used as a component for site preparation.

Herbicides Apply herbicides in accordance with the label for tame grass eradication or when the no-till method of planting is used.

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Natural Regeneration	Temporary Cover If needed	
Eastern Gamagrass	10.0 lbs	Dec 1 – July 1
No-till Corn (Temporary Cover)	1/7 bu (12,000-16,000 corn plants/ac)	
Tall Grass Mixture (Deer/Turkey)		
Big Bluestem	1.0 lb PLS <u>1/</u>	Dec 1 – July 1
Indian grass	1.0 lb PLS <u>1/</u>	
Little Bluestem	1.0 lb PLS <u>1/</u>	
Sideoats Grama	1.0 lb PLS <u>1/</u>	
Switchgrass	0.5 lb PLS <u>1/</u>	
Kobe/Korean Lespedeza	5.0 lbs	
OR		
Single or Mix of:		
Illinois Bundleflower		
Partridge Pea	1.0 lb	
Short Grass Mixture (Quail/Rabbit)		
Little Bluestem	3.0 lbs PLS <u>1/</u>	Dec 1 – July 1
Indiangrass	0.5 lb PLS <u>1/</u>	
Sideoats Grama	1.0 lb PLS <u>1/</u>	
Kobe/Korean Lespedeza	5.0 lbs	
OR		
Single or Mix of:		
Illinois Bundleflower		
Partridge Pea	1.0 lb	

Broadcast Planting Mixture

Switchgrass	8.0 lbs PLS <u>1</u> /	Apr 1 – July 1
(Cave-in-Rock, Blackwell)		
Kobe/Korean Lespedeza	5.0 lbs	

Trees:

Yellow Poplar	12x12 (302/ac)	Nov 1 – Apr 1
White Ash	12x12 (302/ac)	Nov 1 – Apr 1
Green Ash	12x12 (302/ac)	Nov 1 – Apr 1
Hickory	12x12 (302/ac)	Nov 1 – Apr 1
Pecan	12x12 (302/ac)	Nov 1 – Apr 1
Black Walnut	12x12 (302/ac)	Nov 1 – Apr 1
Blackgum	12x12 (302/ac)	Nov 1 – Apr 1
Persimmon	12x12 (302/ac)	Nov 1 – Apr 1
Cherrybark Oak	12x12 (302/ac)	Nov 1 – Apr 1
Willow Oak	12x12 (302/ac)	Nov 1 – Apr 1
Sawtooth Oak	12x12 (302/ac)	Nov 1 – Apr 1
Nuttall Oak	12x12 (302/ac)	Nov 1 – Apr 1
Shumard Oak	12x12 (302/ac)	Nov 1 – Apr 1
Black Oak	12x12 (302/ac)	Nov 1 – Apr 1
Pin Oak	12x12 (302/ac)	Nov 1 – Apr 1
Water Oak	12x12 (302/ac)	Nov 1 – Apr 1
Swamp Chestnut Oak	12x12 (302/ac)	Nov 1 – Apr 1
Swamp White Oak	12x12 (302/ac)	Nov 1 – Apr 1

Shrubs:

Crabapple	12x12 (302/ac)	Nov 1 – Apr 1
Flowering Dogwood	12x12 (302/ac)	Nov 1 – Apr 1
Washington Hawthorne	8 x 8 (680/ac)	Nov 1 – Apr 1
Silky Dogwood	8 x 8 (680/ac)	Nov 1 – Apr 1
Indigo Bush	8 x 8 (680/ac)	Nov 1 – Apr 1
Spicebush	8 x 8 (680/ac)	Nov 1 – Apr 1
Wild Plum	8 x 8 (680/ac)	Nov 1 – Apr 1
Chickasaw Plum	8 x 8 (680/ac)	Nov 1 – Apr 1
Shrub lespedeza:		
VA-70, Amquail, Thunbergii only	3 x 3 (4,900/ac)	Nov 1 – Apr 1

Temporary Cover – Summer

Millet, White Proso	20.0 lbs	May 1 – July 1
Millet, Foxtail	20.0 lbs	May 1 - July 1
Buckwheat	30.0 lbs	May 1 – Aug 1

Corn (w/eastern gamagrass only)	12,000-16,000 plts/ac	June 1
---------------------------------	-----------------------	--------

Temporary Cover – Winter

Crimson Clover	20.0 lbs	Aug 1 – Oct 1
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Wheat and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20
Rye and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20

1/ *PLS = Pure Live Seed*

WHIP 12 Streambank and Shoreline Protection FOTG Practice Code 580

A. PURPOSE

The purpose of this practice is to stabilize eroding streambanks while providing improved fish habitat, aquatic endangered and threatened species habitat, and water quality benefits. The practice will decrease sedimentation, create stream shading, and provide detritus for aquatic organisms.

B. PROGRAM POLICY

Eligible project sites shall meet the following conditions:

- Stream has perennial flow or
- Seasonal streams, excluding gullies and sod waterways.
- Contain stream-banks exposed due to lack of adequate cover.
- Have a drainage area immediately upstream of less than 50,000 acres.
- Have a bank less than 12 feet in vertical height as measured from edge of water at base flow.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall have a cost share limit of \$5,000 per site not to exceed \$15,000 provided to an applicant per contract. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components

Trees
Shrubs
Planting Costs
Eligible Seed
Seeding
Temporary Cover
Mulch
Labor
Root Wad Installation
Coconut Fiber Roll
Rock Riprap
Geotextile

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately.

E. REQUIREMENTS

The following are requirements for this practice:

1. The planted area shall not be grazed by domestic livestock for the life of the long term contract.
2. Practice shall provide adequate streambank stabilization and reduce sediment being delivered to receiving waters.
3. A minimum of two rows of trees shall be established beginning at the top of all stabilized stream-banks.
4. A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

F. PLANTING TIMESPAN

Planting after the WHIP long term contract is approved by the Contracting Officer (Area Conservationist) shall be completed as scheduled in the Wildlife Habitat Development Plan, unless the producer can provide acceptable documentation that seed stock is not available.

G. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

All necessary permits shall be obtained by the participant. Permits needed may include those issued by the U.S. Army Corps of Engineers (ACOE), Tennessee Department of Environment and Conservation (TDEC), and/or the Tennessee Valley Authority (TVA).

H. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

- Participant destroys the cover or structure during it's lifespan; or
- Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

I. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

J. SPECIFICATIONS

Approved Cover Approved plant materials are listed below. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist.

Requirements Temporary cover, when required, is authorized. .

A current soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.

If needed, apply mulch as recommended by the FOTG conservation practice standard code 342.

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Switchgrass	15.0 lbs (PLS <u>1/</u>)	Apr 1 – July 1
Virginia Wildrye	20.0 lbs (PLS <u>1/</u>)	Aug 15 – Oct 15 Feb 20 – Apr 1
Temporary Cover – Summer		
Millet, Browntop	25-40 lbs	May 1 – July 1
Sudangrass	30 lbs	Apr 1 – July 1
Temporary Cover – Winter		
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Trees		
Yellow Poplar	12x12 (302/ac)	Nov 1 – Apr 1
White Ash	12x12 (302/ac)	Nov 1 – Apr 1
Green Ash	12x12 (302/ac)	Nov 1 – Apr 1
Hickory	12x12 (302/ac)	Nov 1 – Apr 1
Pecan	12x12 (302/ac)	Nov 1 – Apr 1
Black Walnut	12x12 (302/ac)	Nov 1 – Apr 1
Blackgum	12x12 (302/ac)	Nov 1 – Apr 1
Persimmon	12x12 (302/ac)	Nov 1 – Apr 1
Cherrybark Oak	12x12 (302/ac)	Nov 1 – Apr 1
Willow Oak	12x12 (302/ac)	Nov 1 – Apr 1
Sawtooth Oak	12x12 (302/ac)	Nov 1 – Apr 1
Nuttall Oak	12x12 (302/ac)	Nov 1 – Apr 1
Shumard Oak	12x12 (302/ac)	Nov 1 – Apr 1
Black Oak	12x12 (302/ac)	Nov 1 – Apr 1

Pin Oak	12x12 (302/ac)	Nov 1 – Apr 1
Water Oak	12x12 (302/ac)	Nov 1 – Apr 1
Swamp Chestnut Oak	12x12 (302/ac)	Nov 1 – Apr 1
Swamp White Oak	12x12 (302/ac)	Nov 1 – Apr 1

Shrubs

Bankers Willow	3x3 (4,840/ac)	Nov 1 – Apr 1
Coastal Plain Willow	3x3 (4,840/ac)	Nov 1 – Apr 1
Buttonbush	3x3 (4,840/ac)	Nov 1 – Apr 1
Silky Dogwood	8x8 (680/ac)	Nov 1 – Apr 1
Gray Dogwood	8x8 (680/ac)	Nov 1 – Apr 1

Eligible plant materials from cuttings (local sources collected on site):

Cuttings

Black Willow	3x3 (4,840/ac)	Dec 1 – Mar 1
Coastal Plain Willow	3x3 (4,840/ac)	Dec 1 – Mar 1
Buttonbush	3x3 (4,840/ac)	Dec 1 – Mar 1
Silky Dogwood	3x3 (4,840/ac)	Dec 1 – Mar 1
Gray Dogwood	3x3 (4,840/ac)	Dec 1 – Mar 1
Eastern Cottonwood	3x3 (4,840/ac)	Dec 1 – Mar 1
American Elder	3x3 (4,840/ac)	Dec 1 – Mar 1

1/ PLS = Pure Live Seed

WHIP 13**Wetland Enhancement/Creation FOTG Practice Code 657
/Restoration****A. PURPOSE**

The purpose of this practice is to provide habitat for waterfowl, wading birds, other aquatic-based wildlife, and neotropical songbirds, while providing water quality benefits to associated wetlands and water bodies.

B. PROGRAM POLICY

Apply this practice to establish permanent wildlife habitat on cropland, idle grassy areas, forestlands, and pasture/hay land consisting of primarily introduced grasses. This practice will consist of hydrology restoration or enhancement. Tree planting shall be restricted to wetness limited, non-hydric soils in capability classes IIw or IIIw.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Restore or enhance hydrology on prior converted croplands.
- Create wetland conditions on capability classes IIw or IIIw soils that are non-hydric.
- Improve wildlife habitat benefits to an acceptable level.
- Prevent degradation of environmental benefits.
- Be maintained for the expected lifespan of the practice.
- Be included in the approved Wildlife Habitat Development Plan.

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components

Earthmoving for Dike Construction or Tile Breaks

Water Control Structure

Minerals

Eligible Seed

Seedbed Preparation

Seeding

Trees

Shrubs

Mulch

Temporary Cover

Herbicide Application

Temporary cover will be eligible under one of the following conditions: (a) determined needed until required seeds or plant stock is available; (b) needed because normal planting period for the species has passed; (c) needed because of a soil condition such as chemical residue that will not allow establishment of cover immediately.

Seeding costs for herbaceous plant materials is only allowed to establish cover on constructed dikes and spillways.

E. REQUIREMENTS

The following are requirements for this practice:

1. The planted area shall not be harvested or grazed by domestic livestock for the life of the long term contract.
2. Eligibility shall require that a certified wetland determination be completed prior to approval of the WHIP long term contract.
3. Prior converted cropland areas may only be managed as moist soil management units. No cropping is allowed. No more than 25 percent of the impoundment area may be planted to an annual grain (e.g. corn, soybeans) for flooding each year.
4. All water control structures shall be closed by October 1 each year, and the project site shall not be drained until after March 1
5. Trees shall be planted with a mixture of at least three species. Tree species shall be adapted to the site, and when identified as an oak site, shall consist of at least two species of oaks.
6. Impoundment areas may be disked to control woody invasion. Impoundment areas may not be disked more than one year out of four.
7. The following limitations apply to all dike construction planned under WHIP 13:
 - a. Earthmoving cost is limited to \$5,000 per site not to exceed \$15,000 per contract.
 - b. The maximum pool depth of the impoundment area is three feet below natural ground, with the exception of borrow ditches. Borrow ditches may not constitute more than 5 percent of the impoundment.
8. A soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs or temporary cover.
9. If needed, apply mulch as recommended by the TN NRCS EFOTG conservation practice standard code 342.

F. PLANTING TIMESPAN

Planting after the WHIP long term contract is approved by the Contracting Officer (Area Conservationist) shall be completed as scheduled in the Wildlife Habitat Development Plan, unless the producer can provide acceptable documentation that seed stock is not available.

G. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

All necessary permits shall be obtained by the participant. Permits needed may include those issued by the U.S. Army Corps of Engineers (ACOE), Tennessee Department of Environment and Conservation (TDEC), and/or the Tennessee Valley Authority (TVA).

H. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

- Participant destroys the cover or structure during it's lifespan; or
- Cover fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

I. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

J. SPECIFICATIONS

Approved Cover Approved plant materials are listed below. Substitutions may be allowed subject to prior approval by the WHIP program leader or state biologist. Permanent perennial vegetation shall be established on all newly constructed dikes.

Requirements Temporary cover is only allowed for constructed dikes.

A soil test is required for all permanent herbaceous plantings. Lime and fertilizer are NOT required for trees, shrubs, or temporary cover.

If needed, apply mulch as recommended by the NRCS FOTG Conservation Practice Standard Code 342.

Permanent Perennial Herbaceous Vegetation for Dikes:

<u>Eligible Seeds</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Switchgrass	10 lbs	Apr 1 – July 1
Kobe/Korean Lespedeza	5 lbs	
Switchgrass	15 lbs (PLS <u>1/</u>)	Apr 1 – July 1

Tree/Shrub Establishment:**Species:**

Bald Cypress	12x12 (302/ac)	Nov 1 – Apr 1
Green Ash	12x12 (302/ac)	Nov 1 – Apr 1
Yellow Poplar	12x12 (302/ac)	Nov 1 – Apr 1
Native Sweet Pecan	12x12 (302/ac)	Nov 1 – Apr 1
Water Oak	12x12 (302/ac)	Nov 1 – Apr 1
Willow Oak	12x12 (302/ac)	Nov 1 – Apr 1
Cherrybark Oak	12x12 (302/ac)	Nov 1 – Apr 1
Pin Oak	12x12 (302/ac)	Nov 1 – Apr 1
Swamp Chestnut Oak	12x12 (302/ac)	Nov 1 – Apr 1
Swamp White Oak	12x12 (302/ac)	Nov 1 – Apr 1
Sweetgum	12x12 (302/ac)	Nov 1 – Apr 1
Nuttall Oak	12x12 (302/ac)	Nov 1 – Apr 1
Shumard Oak	12x12 (302/ac)	Nov 1 – Apr 1
Cranberry Seedlings	Call NRCS biologist for recommendations.	

Temporary Cover - Summer

Millet, Japanese	20 lbs	May 1 – July 1
Millet, Browntop	20 – 40 lbs	May 1 – July 1
Millet, Foxtail	20 lbs	May 1 – July 1
Sudangrass	30 lbs	Apr 1 – July 1

Temporary Cover – Winter

Crimson Clover	20 lbs	Aug 1 – Oct 1
Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Wheat and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20
Rye and Crimson Clover	1 bu; 10 lbs	Sept 1 – Oct 20

A. PURPOSE

The purpose of this practice is to exclude livestock from areas where wildlife habitat is to be protected or enhanced.

B. PROGRAM POLICY

Apply this practice to protect permanent wildlife habitat including upland wildlife habitat, woodlands, wetlands, riparian areas, streams and other water bodies.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan
- Have livestock presently on the offered acres and be used to exclude livestock from WHIP contracted land.

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

Eligible Components:

High Tensile Wire

Barbed Wire

Posts

Gates

Energizer

Labor

E. REQUIREMENTS

This practice shall meet or exceed the Tennessee NRCS FOTG standard for fencing (code 382). Four strands of wire are the maximum cost shared.

G. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

H. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if either of the following applies:

- The practice fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.
- The participant destroys the fencing during its lifespan.

I. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

J. SPECIFICATIONS

This practice shall meet or exceed NRCS FOTG standard for fencing (code 382).

**WHIP 15 Pest Management/
Invasive Species Control**

FOTG Practice Code 595

A. PURPOSE

The purpose of this practice is to eliminate or control the spread of noxious/invasive plant species to restore, maintain, or enhance wildlife habitat.

B. PROGRAM POLICY

Apply this practice for control of noxious/invasive plant species on land included in the Wildlife Habitat Development Plan (WHDP). Noxious/invasive plant species other than those listed below may be treated with prior approval of the WHIP Program Leader or State Biologist.

C. ELIGIBILITY

To be eligible for cost share, this practice shall:

- Improve wildlife habitat benefits to an acceptable level
- Prevent degradation of environment benefits
- Be maintained for the expected lifespan of the practice
- Be included in the approved Wildlife Habitat Development Plan
- Treat one or more of the following plant infestations:

1. Purple Loosestrife	<i>Lythrum salicaria</i>	1/, 2/
	<i>Lythrum virgatum</i>	1/, 2/
2. Tree of Heaven	<i>Ailanthus altissima</i>	2/
3. Autumn olive	<i>Elaeagnus umbellata</i>	2/
4. Sericea lespedeza	<i>Lespedeza cuneata</i>	2/
5. Chinese privet	<i>Ligustrum sinense</i>	2/
6. Common privet	<i>Ligustrum vulgare</i>	2/
7. Nepalgrass	<i>Microstegium vimineum</i>	2/
8. Kudzu	<i>Pueraria Montana</i>	2/
9. Multiflora rose	<i>Rosa multiflora</i>	2/
10. Johnson grass	<i>Sorghum halepense</i>	2/

1/ TN Dept of Agriculture Pest Plant

2/ TN Invasive Exotic Plant List, TN Exotic Pest Plant Council,
Rank 1 – Severe Threat

D. COST-SHARE POLICY

Eligible practice components for this practice shall be determined needed by NRCS and specified in an approved Wildlife Habitat Development Plan. This practice shall be cost shared at a rate to meet the minimal needs of the NRCS wildlife habitat development plan.

WHIP 15 Cost Share Practices:

Pest Management – Herbaceous Species Control

Species cost-shared under this cost category include: purple loosestrife, sericea lespedeza, nepalgrass, multiflora rose, and johnsongrass.

Pest Management – Woody Species Control

Species cost-shared under this cost category include: tree of heaven, autumn olive, Chinese privet, and common privet.

Pest Management – Kudzu Control

Only Kudzu is authorized for cost-share under this cost category

Eligible Components:

Herbicides

Herbicide application

Mechanical Clearing/Site Prep

Temporary Cover

Temporary Cover will be eligible under one of the following conditions:

1) determined needed until normal planting dates for other planned practices has passed and/or erosion problems may occur if left untreated; 2) determined needed because of a soil condition such as chemical residue will not allow for timely establishment of cover

Mechanical clearing and shaping is authorized under one of the following conditions: 1) As needed to reshape area to reduce erosion after the invasive species has been eradicated; 2) As part of the eradication treatment 3) As need to prepare site for seeding of temporary cover or other WHIP practice and associated cover.

No more than \$20,000 in cost share may be received for Pest Management – Invasive Species Control per contract.

Cost share shall be refunded if the practice fails to provide the desired wildlife benefits during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

E. REQUIREMENTS

A pest management plan shall be included in the WHDP. Refer to TN FOTG 595 for required elements of a pest management plan. This practice shall meet or exceed the Tennessee NRCS FOTG standard for Pest Management (code 595).

1. Chemicals used in performing the practice must be:

a. Federally and state registered

- b. Applied according to authorized registered uses, directions, on the label, and within other federal or state policies or requirements

F. ENVIRONMENTAL CONCERNS

Consider other resources and environmental concerns (e.g. cultural, wetlands, etc) as prescribed by the National Environmental Policy Act (NEPA) and other applicable laws and regulations when establishing this practice. A TN-CPA 25 must be completed for each WHDP.

G. PRACTICE MAINTENANCE

The practice shall be maintained without additional federal cost share for the expected lifespan of the practice. Cost share shall be refunded if desired wildlife benefits fail during the life of the WHIP Contract, unless the failure is caused by circumstances beyond the participant's control.

H. TECHNICAL RESPONSIBILITY

NRCS shall have technical responsibility for this practice.

I. SPECIFICATIONS

Planning and application of this practice must meet all requirements of Tennessee NRCS FOTG standard for Pest Management (code 595). Herbicides can be injurious to non-target plants as well as to humans. Use only approved herbicides and pesticides according to label. Grazing, prescribed burning, or other activity as prescribed by planning biologist is encouraged prior to eradication.

Requirements Temporary cover, when needed, is authorized. A current soil test is highly recommended, although not required, for establishment of temporary cover.

Herbicides Apply herbicides in accordance with the label for eradication.

<u>Eligible Seeds or Plants</u>	<u>Seeding Rates (per acre)</u>	<u>Seeding Dates</u>
Natural Regeneration	Temporary Cover, if needed	See temporary cover below
Temporary Cover – Summer		
Millet, White Proso	20.0 lbs	May 1 – July 1
Millet, Foxtail	20.0 lbs	May 1 - July 1
Buckwheat	30.0 lbs	May 1 – Aug 1

Temporary Cover – Winter

Winter Wheat	1.5 – 2 bu	Sept 1 – Oct 20
Cereal Rye	1.5 – 2 bu	Sept 1 – Oct 20
Oats	1.5 – 2 bu	Sept 1 – Oct 20

517.50 Evaluation

Evaluation: To evaluate the effectiveness of WHIP conservation planning and implementation, WHIP will utilize the Tennessee NRCS *Wildlife Habitat Evaluation Procedure For Resource Management Systems* located in the “Tools” tab of Section IV of the NRCS TN Field Office Technical Guide (FOTG). The *Wildlife Habitat Evaluation Procedure* will be completed before installation of conservation practices (baseline) and again after implementation of conservation practices (but before the end of the contract period) to determine improvement/enhancement of wildlife habitat installed through WHIP. In order to meet WHIP wildlife quality criteria, the conservation treatment unit index must be 0.75 or greater following implementation of WHIP conservation practices.